



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/895,235	06/28/2001	Lance W. Russell	10003532-1	8674
7590	07/03/2006		EXAMINER	
HEWLETT-PACKARD COMPANY			BILGRAMI, ASGHAR H	
Intellectual Property Administration			ART UNIT	PAPER NUMBER
P.O. Box 272400				
Fort Collins, CO 80527-2400			2143	

DATE MAILED: 07/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/895,235	RUSSELL, LANCE W.	
	Examiner	Art Unit	
	Asghar Bilgrami	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 07 April 2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-9 and 11-29 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-9 and 11-29 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 28 June 2001 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1 & (26-29) is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Nowhere in the specification it states that the network management module **proactively** launches migratory recovery modules in to the network.

3. Claims 11 & 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Nowhere in the specification it states “ (c) **after** initiating the recovery process, migrating from the current network node to a successive one.

4. The examiner advices the applicant to avoid incorporating assumed terminology in the claim language that is not clearly and definitively described in the specification.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-9, 11-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Turek et al (U.S.6,460,070).

7. As per claims 1, 11, 19 & 20 Turek disclosed a method for managing a plurality of distributed nodes of a network, comprising: (a) on a current one of the network nodes, determining a status of the current network node; (b) in response to a determination that the current network node has failed, initiating a recovery process on the current network node; (c) after initiating the recovery process, migrating from the current network node to a successive one of the network nodes; and (d) repeating (a), (b), and (c) with the current network node corresponding to the successive network node for each of the nodes in the network (col.3, lines 48-64, col.1, lines 59-62, 65-67, col.2, lines 22-26, col.2, lines 1-3, col.2, lines 22-26 & col.5, lines 32-60). Although Turek did not explicitly uses the terminology “migratory recovery modules” as used by the applicant but instead Turek relates it as “mobile software agent” which perform the same task as the “migratory recovery modules”. At the time the invention was made it would have been obvious to one in the ordinary skill in the art at the time the invention was made to have used such terminology as used by the applicant to describe an entity that conducts

fault analysis and correction of network nodes as described the applicant in the independent claim.

8. As per claims 2, 12, 21, 23, 24 & 25 Turek disclosed the system of claim 1, wherein at least one of the recovery module comprises a respective routing component for determining a next hop address from an origin network node to a destination network node (col.5, lines 32-60).

9. As per claims 3 & 13 Turek disclosed the system of claim 2, wherein the routing component is configured to determine the next hop address based upon a routing table stored at the origin network node (col.5, lines 32-60)

10. As per claims 4 & 14 Turek disclosed the system of claim 1, wherein at least one of the recovery module is configured to determine the status of a network node by sending an inter-process communication to a node process (col.3, lines 65-67, col.4, lines 1-12 & col.5, lines 32-60).

11. As per claims 6 & 16 Turek disclosed the system of claim 1, wherein each of the recovery module is configured to initiate a recovery process on a failed network node in accordance with a restart protocol (col.6, lines 23-59).

12. As per claims 7 & 17 Turek disclosed the system of claim 6, wherein each of the recovery module is configured to initiate a restart of a failed node process by transmitting a request to a process execution service operating on the failed network node (col.6, lines 23-59).

13. As per claims 8 & 18 Turek disclosed the system of claim 1, wherein each of the recovery module is configured to transmit a respective node status message to the network management module (col.2, lines 22-62).

14. As per claim 9 Turek disclosed the system of claim 8, wherein each of the node status messages comprises information obtained from a respective log file generated at a respective failed one of the network node (col.8, lines 58-67 & col.8, lines 1-9).

15. As per claim 22 Turek disclosed the system of claim 21, wherein the operating environment on each of the network nodes provides each of the recovery modules with access to status monitoring resources, recovery resources, and native operative system resources that are available at each of the network nodes (col.8, lines 39-52).

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 5 & 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Turek (U.S. 6,460,070) and Bondi (U.S. 5,710, 885).

18. As per claims 5 & 15 Turek disclosed a system for managing a plurality of distributed nodes of a network, comprising: a recovery modules configured to migrate from one network node to another, determine a status of a network, and initiate a recovery process on a failed network node(col.2, lines 65-67 & col.2, lines 1-46). However Turek did not explicitly disclose wherein the recovery module is configured to determine the status of a network node in accordance with a heartbeat messaging protocol. In the same field of endeavor Bondi disclosed wherein the recovery module is configured to determine the status of a network node in accordance with a heartbeat messaging protocol (col.4, lines 44-65).

It would have been obvious to one in the ordinary skill in the art at the time the invention was made to have incorporated heartbeat messaging protocol as disclosed by Bondi in a system of managing plurality of network nodes as disclosed by Turek in order to make the network management system more reliable resulting in immediate identification and correction of network failures.

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. Claims 26, 27, 28 & 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Turek (U.S. 6,460,070) and Douik et al (U.S. 6,012,152).

21. As per claims 26, 27, 28 & 29 Turek disclosed the system of claim 1. However Turek did not explicitly disclose, wherein the network management module statistically identifies target ones of the network nodes to achieve a specified confidence level of network monitoring reliability, and proactively launches the recovery modules into the network by transmitting respective ones of the recovery modules to the identified target network nodes. In the same field of endeavor Douik disclosed wherein the network management module statistically identifies target ones of the network nodes to achieve a specified confidence level of network monitoring reliability, and proactively launches the recovery modules into the network by transmitting respective ones of the recovery modules to the identified target network nodes (col.11, lines 64-67 & col.12, lines 1-19).

It would have been obvious to one in the ordinary skill in the art at the time the invention was made to have incorporated statistical means for managing network by proactively launching recovery modules as disclosed by Douik in the method of managing plurality of nodes as disclosed by Turik

in order to automate and enhance the management of the network resulting in a trouble free and reliable network.

Response to Arguments

22. Applicant's arguments filed 7 April 2006 have been fully considered but they are not persuasive.
23. Applicant argued Turek does not show system proactively launching migratory recovery module as stated in the amended claim 1.
24. As to applicant's argument the examiner would like to point out the 112 rejection on line 2, 103 rejection on line 7 and 103 rejection on line 17 of this office action.
25. Applicant argued that Turek does not show mobile software agent being used to determine the status of a network node using heartbeat-messaging protocol as stated in the amended claim 5.
26. As to applicant arguments please see examiners rejection on line 18.

Conclusion

27. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Asghar Bilgrami whose telephone number is 571-272-3907. The examiner can normally be reached on M-F, 8:00-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley can be reached on 571-272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Asghar Bilgrami
Examiner
Art Unit 2143

AB

DAVID WILEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100